## 18. A NOTE ON *HYDRACHNA* SP. PARASITIC ON *RANATRA FILIFORMIS* AND *RANATRA ELONGATA*

It is well known that the larvae of *Hydrachna* prefer insect hosts for parasitisation. In course of examination of the nymphs and adults of different species of *Laccotrephes*, *Ranatra*, and *Spherodema*, it was observed that only the nymphs and adults of *Ranatra* were parasitised by the larvae of *Hydrachna* sp. A number of these mites have been reported as parasites on *Nepa* from Britain and the preference exhibited for *Ranatra* sp. is indeed striking.

About 6 to 18 red, oval masses were found attached to the various regions of the body of the nymphs and adults. The regions most commonly infested by these parasites were the base of the thorax and abdomen, the former being more heavily parasitised. The larvae, soon after attaching to the host, changed into oval masses. In the course of two to three weeks the adult mites dropped off to the bottom of the pond and led a free life.

*Table showing No. of parasites and their place of attachment on individual hosts*

| Place of attachment | No. of immature *R. filiformis* | Stages on *R. elongata* |
|---|---|---|
| head .. | 2, 1, 3 | 4, 2, 2, 2, 2 |
| thorax .. | 2, 2, 3, 3, 3, 1 | 14, 6, 2, 4, 4, 5, 2 |
| legs .. | 5, 4, 1 | 4, 6, 3, 4 |
| abdomen .. | 1, 1 | 4, 1, 2 |

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## 19. ON THE OCCURRENCE OF *NEBALIA LONGICORNIS* IN INDIAN WATERS

(*With a plate*)

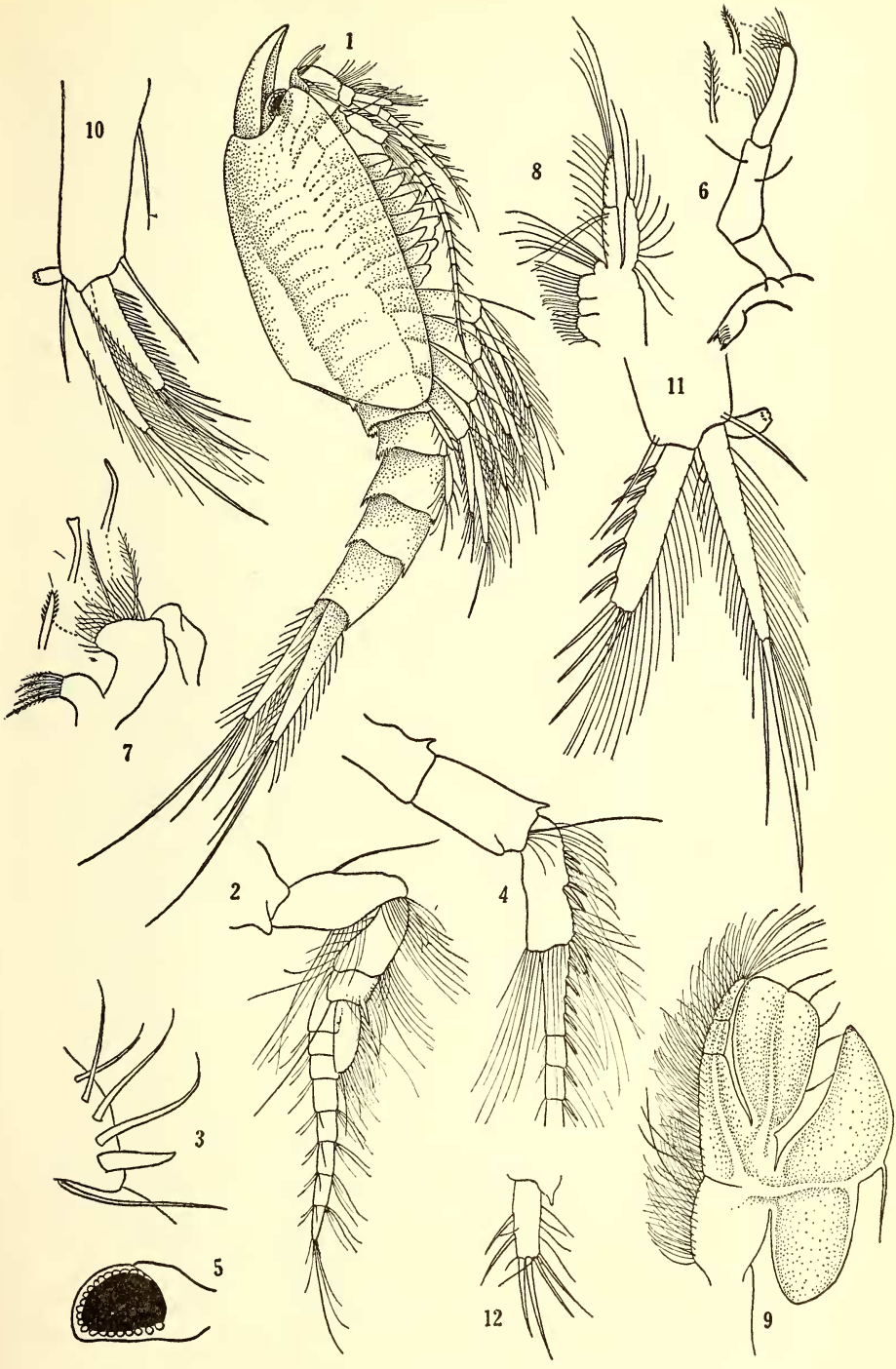
From the Indian waters the only record of a Phyllocarid is that of Prof. W. M. Tattersall (1906) who recorded *Nebalia bipes* from Ceylon. The present collection, I am informed, was very rich and consisted of a huge swarm of hundreds of specimens found in shallow water at Krusadai Islands. The locality was of a swampy nature with clayey bottom and mangrove-like growth of green algae. The pre-

sence of the animal was noticed due to the slight 'boiling' of the water surface.

Species of *Nebalia* have been recorded from all over the world. Thiele (1904) assigned all the species recorded from the northern Seas to *N. bipes* and those from the southern Seas to *N. longicornis*. Based on the character of the rostrum, eyes, and the antennular peduncle, he recognised several subspecies. According to Calman (1917) and Cannon (1931) some of the characters on which the subspecies were created are unimportant and variable, and a detailed study of the various species is necessary for establishing their validity. In view of the dearth of information on the genus, a detailed description of the present specimens is included. I am deeply indebted to Shri Sivaprasad of S.N. College, Quilon, for the two specimens, and to Dr. C. C. John of the University of Kerala for help in their study.

**Nebalia longicornis** G. M. Thomson

Carapace about twice as long as broad, anteroinferior parts produced forwards. Rostrum rather broad, about a third of the length of the carapace, 0.8 mm. long and 0.3 mm. broad. Posterior border of abdominal segments serrated on the dorsal and ventral sides. Caudal rami flattened, as long as the last two abdominal segments combined, with an outer row of spines and inner row of long setae; distal border with three long spiny setae, one of them longer than the ramus. Cornea of the eye occupying slightly more than half the length, sensory tubercle not discernible. Antennule with four segmented peduncle, first segment stout, with a lower distal process, second segment large, with a long dorsal seta, fourth segment short, with one stout spine and row of five to six stout setae. Mobile scale with its upper border thickly setose, flagellum stout, eight segmented; distal segments with a pair of olfactory setae. Antennal peduncle four segmented, segments one and two with an upper distal spine, segments three and four coalesced, with three pairs of stout spines and a distal row of long setae; flagellum nine segmented, first segment a composite one, each segment with an upper distal spine. Mandible slender, incisor much reduced, molar strongly toothed, palp three segmented, third segment with an inner row of long pectinate setae and a short apical row of barbed spines. Maxillule with two endites, first small, with a row of pectinate setae, second endite with various types of setae as shown in the figure; palp long and indistinctly segmented, with long setae. Maxilla with four endites, fourth very small and with long setae, endopod two segmented, with a row




*Nebalia longicornis* G. M. Thomson.

1. Entire animal ; 2. antennule ; 3. same, fourth segment enlarged ; 4. antenna ; 5. eye ; 6. mandible; 7. maxillule ; 8. maxilla ; 9. first thoracic limb ; 10. first pleopod ; 11. second pleopod ; 12. fifth pleopod.